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United States Patent [19]

Hou et al.

[11] **Patent Number:** **5,360,689**[45] **Date of Patent:** **Nov. 1, 1994**[54] **COLORED POLYMERIC DIELECTRIC
PARTICLES AND METHOD OF
MANUFACTURE**[75] **Inventors:** **Wei-Hsin Hou; Thomas B. Lloyd,**
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Schubert, Shoreham, N.Y.[73] **Assignee:** **Copylete, Inc.,** Huntington Station,
N.Y.[21] **Appl. No.:** **65,572**[22] **Filed:** **May 21, 1993**[51] **Int. Cl.⁵** **G03G 17/04**[52] **U.S. Cl.** **430/34; 430/32;**
430/37; 430/37; 525/331.3; 525/331.5;
525/366; 525/369; 525/379; 526/296;
526/344.2[58] **Field of Search** 430/32, 34, 37, 38[56] **References Cited****U.S. PATENT DOCUMENTS**3,775,107 11/1973 Tulagin et al. 96/1.4
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4,891,286 1/1990 Gibson 430/38*Primary Examiner*—Mark Nagumo*Attorney, Agent, or Firm*—Plevy & Associates[57] **ABSTRACT**

A process for forming dielectric particles includes admixing a vinyl halide monomer and a crosslinker in a liquid dispersion medium to form a first mixture. A second mixture of an initiator and a stabilizer is prepared and added to the first mixture to form a third mixture in which the monomer polymerizes to form white crystalline polymer particles which are sonified for uniformity. The particles may be stained by exposure to a dehydrohalogenation reagent and dispersed in an electrophoretic fluid for use in an electrophoretic display.

20 Claims, 1 Drawing Sheet